

ABSTRACT OF THE DISCLOSURE

A thin film transistor wherein the semiconductor layer is prepared by a process including:

creating a composition comprising a liquid and a self-organizable polymer at least partially dissolved in the liquid, resulting in dissolved polymer molecules;

reducing the solubility of the dissolved polymer molecules to induce formation of structurally ordered polymer aggregates in the composition;

depositing a layer of the composition including the structurally ordered polymer aggregates; and

drying at least partially the layer resulting in the structurally ordered semiconductor layer, wherein the structural order of the semiconductor layer increases the charge transport capability of the semiconductor layer.